



Solid Metal Construction

Our fittings and components are made from anodized aluminum, stainless steel, and brass. All critical swage connections are metal for continued dependability. Our vernier locking devices are precision formed and heat treated in critical wear areas. Precise surface finishes provide a smooth consistent feel and long service life.

A Superior Conduit System

The McFarlane conduit is made from plated carbon steel wire that has been formed to a "D" shape for increased strength and to give a smooth inside diameter. A virgin Teflon® liner has been inserted into the center of the coil for low friction and high temperature operation. Two different configurations are used to provide good tensile strength. The coil is either over-braided with stainless steel wire, or a double-wound coil is used. Both configurations provide a solid feel under heavy push loads without sacrificing routing flexibility. Finally, a Teflon jacket is extruded over the coil or stainless steel braid for abrasion resistance. Cheap controls with poly liners will not tolerate engine temperatures.

Knobs Make a Difference

Our "pilot friendly" knobs are all compression molded from a cellulose reinforced copolymer melamine-phenol resin. They are post-mold baked for added dimensional stability and strength. Our phenolic knobs are hard and stable. Unlike the soft injection molded knobs, they resist scratching and do not deteriorate with age. The McFarlane knobs meet the latest FAR requirements for shape and color.

Vibration Dampening Features

The McFarlane metal swivel joints have a unique Viton® rubber vibration dampening sleeve with a spring load system that dampens engine induced vibration in the push rod guide tube and metal swivel joint. Molded Viton boots are also used on the push rod guides to seal out contaminants. The Viton rubber withstands the high temperature of the engine environment while resisting degradation from oil and solvents. This system drastically reduces the vibration fretting and wear that leads to premature control failure.

Special Lubrication

During assembly the McFarlane controls have a special lifetime lubrication applied to critical sliding surfaces. This molybdenum disulfide and Teflon based lubricant with a synthetic grease base has been specially formulated to reduce friction. It also prevents galling and contamination locking of the control components from -70° F to over 1000° F. This lubricant is available only in new McFarlane controls.

Consistent Quality

The production of McFarlane controls is interrupted many times for inspections during assembly. All of our assembly and critical inspections are performed 100%. Attention is given to every detail at McFarlane. For instance, we verify the torque required to rotate our vernier mechanism on every vernier control sold.

Tough in any Environment

The McFarlane controls have had an outstanding performance and reliability record in all environments. We have tested our controls in the harshest environments to insure that they will provide long reliable service in the most demanding installations. They work freely at -50°F and have been proven in harsh saltwater environments. Even temperatures approaching the melting point of the steel components can not stop the McFarlane controls from functioning.

- **Solid metal construction**
- **Pilot friendly knobs**
- **Lifetime lubrication**
- **Superior low friction conduit**
- **Custom controls available**

Time Tested

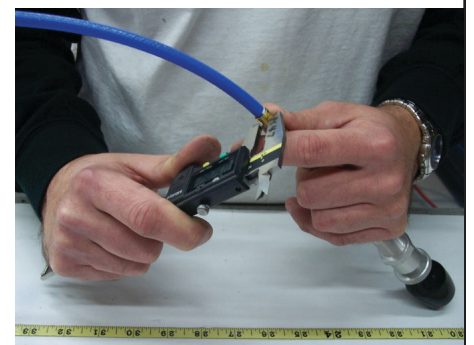
McFarlane manufactures premier aircraft engine controls. With thousands of units in airplanes flying on every continent (yes, even Antarctica), McFarlane controls have a proven track record and are universally recognized by aircraft manufacturers and working pilots.

Recommended Service Life

Due to the criticalness of engine controls and considering their operating environment, the maximum recommended in service time for McFarlane engine controls is equal to the maximum time between engine overhauls as recommended by the engine manufacturer.

Custom Controls

Custom engine controls can be manufactured for aircraft not listed in the approved eligibility charts. All McFarlane custom control cables are built to customer provided specifications. McFarlane custom engine controls duplicate the original customer supplied controls in regard to length, thread size, wear sleeve locations, and travel length. McFarlane custom controls are manufactured to the same standards using the same materials, rigorous testing and inspections as our FAA-PMA products; however, custom controls are not FAA-PMA approved. The user must obtain the proper FAA approvals to use our custom controls.



Engine, Cowl Flap and Carb Heat Controls for Cessna Aircraft



Model	Serial Number	Throttle Control Rod End	Propeller Control Rod End	Mixture Control Rod End or Wire Clamp	Cowl Flap Left	Cowl Flap Right	Carb Heat Control Wire Clamp
120,140*	8000 thru 11846	MC0411091-7 MCS1104-3**		MC600-72			MCS2323-1
140*,140A	11847 thru 15724	MC0411091-7 MCS1104-3**		MC600-72			MC0411090-4CH† MCS2323-1
150*	17001 thru 17683	MC0411091-7 MCS1104-3		MC600-72 MCS2323-6			MCS2323-1
150*	17684 thru 59018	MC0411091-7 MCS1104-3		MC600-72 MCS2323-6			MC0713302-5CH† MCS2323-1
150A,B,C,D,E,F	All	MCS1222-11S MCS1104-3		MC600-72 MCS2323-6			MCS1230-2 MCS2323-1
150G	All	MCS1222-14S MCS1104-3		MC600-72 MCS2323-6			MCS1230-2 MCS2323-1
150H,J,K,L	All	MCC299505-0202S MCS1104-3		MC600-72 MCS2323-6			MCS1230-19 MCS2323-1
150M	All	MCC299505-0202S MCS1104-3		MC600-72 MCS2323-12			MCS1230-19 MCS2323-1
A150K,L	All	MCC299505-0202S MCS1104-3		MC600-72 MCS2323-6			MCS1230-19 MCS2323-1
A150M	All	MCC299505-0202S MCS1104-3		MC600-72 MCS2323-12			MCS1230-19 MCS2323-1
F150F	All	MCS1222-11S MCS1104-3					MCS1230-2 MCS2323-1
F150G	All	MCS1222-14S MCS1104-3		MC600-72 MCS2323-6			MCS1230-2 MCS2323-1
F150H,J,K,L	All	MCC299505-0202S MCS1104-3		MC600-72 MCS2323-6			MCS1230-19 MCS2323-1
F150M	All	MCC299505-0202S MCS1104-3		MC600-72 MCS2323-12			MCS1230-19 MCS2323-1
FA150K,L*	FA1500001 thru FA1500120	MCC299505-0202S MCS1104-3		MC600-72 MCS2323-6			MCS1230-19 MCS2323-1
FA150L*	FA1500121 thru FA1500261	MCC299505-0202S MCS1104-3					MCS2323-1
FA150M	FA1500262 thru FA1500336	MCC299505-0202S MCS1104-3					MCS2323-1
FRA150L,M*	FRA1500121 thru FRA1500311	MCC299505-0202S MCS1104-3					MCS1230-19 MCS2323-1
FRA150M*	FRA1500312 thru FRA1500336	MCS1104-3					MCS1230-19 MCS2323-1
152*	15279406 thru 15282031	MC9863053-20 MCS1104-3		MC600-72 MCS2323-13			MCS1230-19 MCS2323-5
152*	15282032 thru 15285939	MC9863056-1 MCS1104-3		MC600-72 MCS2323-13			MCS1230-19 MCS2323-5
152*	15285940 thru 15286033	MC9863056-1 MCS1104-3		MC600-72 MCS2323-13			MCS2323-5
A152*	A1520735 thru A1520808	MC9863053-20 MCS1104-3		MC600-72 MCS2323-13			MCS1230-19 MCS2323-5
A152*	A1520809 thru A1521049	MC9863056-1 MCS1104-3		MC600-72 MCS2323-13			MCS1230-19 MCS2323-5
F152*	F15201429 thru F15201528	MC9863053-20 MCS1104-3		MC600-72 MCS2323-13			MCS1230-19 MCS2323-5
F152*	F15201529 thru F15201952	MC9863056-1 MCS1104-3		MC600-72 MCS2323-13			MCS1230-19 MCS2323-5
F152*	F15201953 thru F15201980	MC9863056-1 MCS1104-3		MC600-72 MCS2323-13			MCS2323-5
FA152*	FA1520337 thru FA1520347	MC9863053-20 MCS1104-3		MC600-72 MCS2323-13			MCS1230-19 MCS2323-5
FA152*	FA1520348 thru FA1520387	MC9863056-1 MCS1104-3		MC600-72 MCS2323-13			MCS1230-19 MCS2323-5
FA152*	FA1520388 thru FA1520425	MC9863056-1 MCS1104-3		MC600-72 MCS2323-13			MCS2323-5
170	All	MC0411091-2		MC600-72 MCS2323-2			MC0411090-4CH† MCS2323-1
170A	All	MC0411091-2 MCS1104-3**		MC600-72 MCS2323-2			MC0411090-4CH† MCS2323-1
170B*	20267 thru 25372	MC0411091-2 MCS1104-3**		MC600-72			MC0411090-4CH† MCS2323-1
170B*	25373 thru 27169	MCS1222-2S MCS1104-3**		MC600-72			MC0411090-22CH† MCS2323-1
172*	28000 thru 36965	MCS1222-2S MCS1104-3**		MC600-72 MCS2323-2			MC0411090-22CH† MCS2323-1
172*	36966 thru 46754	MCS1222-2S MCS1104-3**		MC600-72 MCS2323-2			MC0713302-5CH† MCS2323-1
172A	All	MCS1222-2S MCS1104-3***		MC600-72 MCS2323-2			MC0713302-5CH† MCS2323-1
172B,C	All	MCS1222-2S MCS1104-3**		MC600-72 MCS2323-2			MCS2323-5
172D	All	MCS1222-2S MCS1104-3		MC600-72 MCS2323-2			MCS2323-5
172E,F	All	MCS1222-15S MCS1104-3		MC600-72 MCS2323-2			MCS2323-5
172G,H	All	MCS1222-15S MCS1104-3		MC600-72 MCS2323-2			MCS1230-7 MCS2323-5
172I,K,L,M*	17256513 thru 17263458	MCC299505-0102 MCS1104-3		MC600-72 MCS2323-2			MCS1230-17
172M*	17263459 thru 17267584	MCC299505-0102 MCS1104-3		MC600-72 MCS2323-13			MCS1230-17 MCS2323-5
172N*	17267585 thru 17271034	MC9863053-15 MCS1104-3		MC600-72 MCS2323-4			MCS1230-17 MCS2323-5
172N*	17271035 thru 17274009	MC9863056-3 MCS1104-3		MC600-72 MCS2323-4			MCS1230-17 MCS2323-5

* Denotes partial model eligibility. **If replacing P/N S1186-1 or P/N 0550158 also order RE-KT-1 hardware kit.
† Denotes eligible for use as a carburetor heat control only. Eligibility continued on next page.

New Controls!

Engine, Cowl Flap and Carb Heat Controls for Cessna Aircraft

McFarlane
FAA-PMA Approved

Model	Serial Number	Throttle Control	Propeller Control	Mixture Control	Cowl Flap Left	Cowl Flap Right	Carb Heat Control Wire Clamp
		Rod End	Rod End	Rod End or Wire Clamp			
172P	17274010 thru 17276654	MC9863056-3 MCS1104-3		MC600-72 MCS2323-13			MCS1230-17 MCS2323-5
172Q	All	MC9863056-3 MCS1104-3		MC600-72 MCS2323-4			MCS2323-5
172R,S	All	MC565-549-021 MCS1104-3		MC565-548-041 MCS1104-3			
172RG	All	MC9863056-8 MCS1104-3	MC345-085-9 MCS1104-3	MC600-72 MCS2323-11			MCS2323-7
F172D	All	MCS1222-2S MCS1104-3		MC600-72 MCS2323-2			MCS2323-5
F172E,F	All	MCS1222-15S MCS1104-3		MC600-72 MCS2323-2			MCS2323-5
F172G,H*	F172-0180 thru F172-0559	MCS1222-15S MCS1104-3		MC600-72 MCS2323-2			MCS1230-7 MCS2323-5
F172H*,K	F172-0560 thru F17200804	MCC299505-0203S MCS1104-3		MC600-72 MCS2323-2			MCS1230-7 MCS2323-5
F172L,M*	F17200805 thru F17201034	MCC299505-0203S MCS1104-3		MC600-72 MCS2323-2			MCS1230-7
F172M*	F17201035 thru F17201234	MCC299505-0102 MCS1104-3		MC600-72 MCS2323-2			
F172M*	F17201235 thru F17201514	MCC299505-0102 MCS1104-3		MC600-72 MCS2323-13			MCS1230-7 MCS2323-5
F172N*	F17201515 thru F17201749	MC9863053-15 MCS1104-3		MC600-72 MCS2323-4			MCS1230-7 MCS2323-5
F172N*	F17201750 thru F17202039	MC9863056-3 MCS1104-3		MC600-72 MCS2323-4			MCS1230-7 MCS2323-5
F172P	F17202040 thru F17202254	MC9863056-3 MCS1104-3		MC600-72 MCS2323-13			MCS1230-7 MCS2323-5
FP172	All	MCS1222-4 MCS1106-4	MCC299506-0105 MCS1104-3	MCS2323-4			MCS2323-5
FR172E	All	MCS1104-3	MCS1223-17 MCS1104-3	MCS1104-3			
FR172F,G,H,J,*	FR17200061 thru FR17200530	MCC299505-0204S MCS1104-3	MCC299506B0104 MCS1104-3	MCS1104-3			
FR172J*	FR17200531 thru FR17200590	MCC299505-0204S MCS1104-3	MCC299506B0104 MCS1104-3	MC9862066-6 MCS1104-3			
FR172K* Note 1	FR17200591 thru FR17200630	MC9863053-10 MCS1104-3	MCC299506B0104 MCS1104-3	MC9862066-6 MCS1104-3	MCS1391-26 (one per aircraft)		
FR172K*	FR17200631 thru FR17200675	MC9863055-10 MCS1104-3	MCC299506B0104 MCS1104-3	MC9862066-6 MCS1104-3	MCS1391-26 (one per aircraft)		
P172D	All	MCS1222-4 MCS1106-4	MCC299506-0105 MCS1104-3	MC600-72 MCS2323-4			MCS2323-5
R172K* Note 1	R1722000 thru R1722929	MC9863053-10 MCS1104-3	MCC299506B0104 MCS1104-3	MC9862066-6 MCS1104-3	MCS1391-26 (one per aircraft)		
R172K*	R1722930 thru R1723454	MC9863055-10 MCS1104-3	MCC299506B0104 MCS1104-3	MC9862066-6 MCS1104-3	MCS1391-26 (one per aircraft)		
175*	55001 thru 55703	MC0411091-27 MCS1106-4	MCS1104-3**	MC600-72 MCS2323-4			MC0411090-22CH† MCS2323-5
175*	55704 thru 56238	MC0411091-30 MCS1106-4	MCS1104-3**	MC600-72 MCS2323-4			MC0713302-5CH† MCS2323-5
175A	All	MCS1222-4 MCS1106-4	MCS1104-3**	MC600-72 MCS2323-4			MC0713302-5CH† MCS2323-5
175B,C	All	MCS1222-4 MCS1106-4	MCS1104-3**	MC600-72 MCS2323-4			MCS2323-5
177	All	MCS1222-19 MCS1104-3	MCS1104-3	MC600-72 MCS2323-2			
177A	All	MCC299505-0301 MCS1104-3	MCS1104-3	MC600-72 MCS2323-4			MCS1230-19 MCS2323-5
177B*	17701371 thru 17702539	MCC299505-0301 MCS1104-3	MCC299506-0105 MCS1104-3	MC600-72 MCS2323-4	MCS1391-25	MCS1391-26	MCS1230-19 MCS2323-5
177B*	17702540 thru 17702752	MC565-549-013 MCS1104-3	MC345-085-4 MCS1104-3	MC600-72	MCS1391-25	MCS1391-26	MCS1230-19 MCS2323-5
177RG*	177RG0001 thru 177RG1051	MCC299505-0401 MCS1104-3	MCC299506-0105 MCS1104-3	MCC299507-0102 MCS1104-3	MCS1391-27	MCS1391-27	
177RG*	177RG1052 thru 177RG1366	MCS1104-3	MC345-085-4 MCS1104-3	MCS1104-3	MCS1391-27	MCS1391-27	
F177RG*	F177RG0001 thru F177RG0160	MCC299505-0401 MCS1104-3	MCC299506-0105 MCS1104-3	MCC299507-0102 MCS1104-3			
F177RG*	F177RG0161 thru F177RG0177	MCS1104-3	MC345-085-4 MCS1104-3	MCS1104-3			
180*	30000 thru 32150	MCS1222-1S MCS1106-4	MCS1223-4 MCS1104-3**	MC600-72 MCS2323-4			MC0411090-22CH† MCS2323-5
180*,180A,B	32151 thru 50661	MCS1222-1S MCS1106-4	MCS1223-4 MCS1104-3**	MC600-72 MCS2323-4			MCS2323-5
180C	All	MCS1222-1S MCS1106-4	MCS1223-4 MCS1104-3**	MC600-72 MCS2323-4			MC0713302-5CH† MCS2323-5
180D,E	All	MCS1222-1S MCS1106-4	MCS1223-4 MCS1104-3**	MC600-72 MCS2323-4	MCS1245-1	MCS1245-2	MC0713302-5CH† MCS2323-5
180F	All	MCS1222-1S MCS1106-4	MCS1223-4 MCS1104-3	MC600-72 MCS2323-4	MCS1245-1	MCS1245-2	MCS1230-2 MCS2323-5
180G	All	MCS1222-1S MCS1106-4	MCS1223-4 MCS1104-3	MC600-72 MCS2323-4	MCS1245-3	MCS1245-2	MCS1230-2 MCS2323-5
180H*	18051446 thru 18051875	MCS1222-13S MCS1106-4	MCS1223-5 † MCS1104-3	MC600-72 MCS2323-4	MCS1572-1	MCS1245-2	MCS1230-2 MCS2323-5
180H*,J	18051876 thru 18052770	MCC299505-0201S MCS1106-4	MCC299506-0103 MCS1104-3	MC600-72 MCS2323-4	MCS1572-1	MCS1245-2	MCS1230-19 MCS2323-5
180K*	18052771 thru 18053000	MC9863053-5 MCS1106-4	MC345-085-3 MCS1104-3	MCS2323-4	MC9860074-3	MC9860074-4	MCS1230-19 MCS2323-5
180K*	18053001 thru 18053203	MC9863055-9 MCS1106-4	MC345-085-3 MCS1104-3	MCS2323-4	MC9860074-3	MC9860074-4	MCS1230-19 MCS2323-5

* Denotes partial model eligibility. **If replacing P/N S1186-1 or P/N 0550158 also order RE-KT-1 hardware kit. † Denotes eligible for use as a carburetor heat control only. Note 1: For serial numbers FR17200591 thru FR17200620 and R1722000 thru R1722880 prop control is only eligible for installation if aircraft has been modified as per Cessna Service Letter 78-51. Eligibility continued on next page.

Model	Serial Number	Throttle Control Rod End	Propeller Control Rod End	Mixture Control Rod End or Wire Clamp	Cowl Flap Left	Cowl Flap Right	Carb Heat Control Wire Clamp
182	All	MCS1222-1S MCS1106-4	MCS1223-4 MCS1104-3**	MC600-72 MCS2323-4			MCS2323-5
182A	All	MCS1222-1S MCS1106-4	MCS1223-4 MCS1104-3**	MC600-72 MCS2323-4			MC0411090-22CH+ MCS2323-5
182B,C	All	MCS1222-1S MCS1106-4	MCS1223-4 MCS1104-3**	MC600-72 MCS2323-4			MC0713302-5CH+ MCS2323-5
182D	All	MCS1222-1S MCS1106-4	MCS1223-4 MCS1104-3**	MC600-72 MCS2323-4	MCS1245-1	MCS1245-2	MC0713302-5CH+ MCS2323-5
182E,F,G	All	MCS1222-6S MCS1106-4	MCS1223-3 MCS1104-3	MC600-72 MCS2323-4	MC9860058-3	MC9860058-4	MCS1230-3 MCS2323-5
182H,J,K	All	MCS1222-13S MCS1106-4	MCS1223-6 MCS1104-3	MC600-72 MCS2323-4	MC9860058-3	MC9860058-4	MCS1230-3 MCS2323-5
182L,M,N*	18258506 thru 18260445	MCC299505-0201S MCS1106-4	MCC299506-0102 MCS1104-3	MC600-72 MCS2323-4	MC9860058-3 MCS1106-3	MC9860058-4	MCS1230-10 MCS2323-5
182N*,P*	18260446 thru 18261425	MCC299505-0201S MCS1106-4	MCC299506-0102 MCS1104-3	MC600-72 MCS2323-4	MC9860058-3	MC9860058-4	MCS1230-10 MCS2323-5
182P*	18261426 thru 18264835	MCC299505-0205 MCS1106-4	MCC299506-0102 MCS1104-3	MC600-72 MCS2323-4	MC9860058-3	MC9860058-4	MCS1230-10 MCS2323-5
182P*	18264836 thru 18265175	MC9863053-5 MCS1106-4	MCC299506-0102 MCS1104-3	MC600-72 MCS2323-4	MC9860058-3	MC9860058-4	MCS1230-10 MCS2323-5
182Q*	18265176 thru 18266590	MC9863053-5 MCS1106-4	MC9862067-3 MCS1104-3	MC600-72 MCS2323-4	MC9860058-3	MC9860058-4	MCS1230-10 MCS2323-5
182Q*	18266591 thru 18267715	MC9863055-9 MCS1106-4	MC9862067-3 MCS1104-3	MC600-72 MCS2323-4	MC9860058-3	MC9860058-4	MCS1230-10 MCS2323-5
182R	All	MC9863055-9 MCS1106-4	MC9862067-3 MCS1104-3	MC600-72 MCS2323-4	MC9860058-3	MC9860058-4	MCS1230-10 MCS2323-5
182S, 182T, T182T	All	MC565-549-031 MCS1104-3	MC565-580-038 MCS1104-3	MC565-548-042 MCS1104-3	MC580-703-024	MC580-703-025	
A182J,K,L,N		MCS1106-4	MCS1104-3	MCS2323-4			MCS2323-5
F182P	All	MC9863053-5 MCS1106-4	MCC299506-0102 MCS1104-3	MC600-72 MCS2323-4			MCS1230-10 MCS2323-5
F182Q*	F18200026 thru F18200094	MC9863053-5 MCS1106-4	MC9862067-3 MCS1104-3	MC600-72 MCS2323-4			MCS1230-10 MCS2323-5
F182Q*	F18200095 thru F18200169	MC9863055-9 MCS1106-4	MC9862067-3 MCS1104-3	MC600-72 MCS2323-4			MCS1230-10 MCS2323-5
FR182*	FR18200001 thru FR18200020	MC9863053-11 MCS1104-3	MC345-085-5 MCS1104-3	MCS2323-11			MCS1230-10 MCS2323-1
FR182*	FR18200021 thru FR18200045	MC9863056-6 MCS1104-3	MC345-085-5 MCS1104-3	MCS2323-11			MCS1230-10 MCS2323-1
FR182*	FR18200046 thru FR18200070	MC9863056-6 MCS1104-3	MC345-085-8 MCS1104-3	MCS2323-11			MCS1230-10 MCS2323-1
R182*	R18200001 thru R18200583	MC9863053-11 MCS1104-3	MC345-085-5 MCS1104-3	MCS2323-11	MC9860075-3	MC9860075-4	MCS1230-10 MCS2323-1
R182*	R18200584 thru R18201313	MC9863056-6 MCS1104-3	MC345-085-5 MCS1104-3	MCS2323-11	MC9860075-3	MC9860075-4	MCS1230-10 MCS2323-1
R182*	R18201314 thru R18202041	MC9863056-6 MCS1104-3	MC345-085-8 MCS1104-3	MCS2323-11	MC9860075-3	MC9860075-4	MCS1230-10 MCS2323-1
T182	All	MC9863056-7	MC345-085-8 MCS1104-3	MCS2323-11	MC9860075-3	MC9860075-4	MCS2323-3
TR182*	R18200584 thru R18201313	MC9863056-7 MCS1104-3	MC345-085-6 MCS1104-3	MCS2323-11	MC9860075-3	MC9860075-4	MCS2323-3
TR182*	R18201314 thru R18202041	MC9863056-7 MCS1104-3	MC345-085-8 MCS1104-3	MCS2323-11	MC9860075-3	MC9860075-4	MCS2323-3
185	All	MC1213228-3 MCS1104-3	MCS1223-5 MCS1104-3	MC1213229-2 MCS1104-3	MCS1245-3	MCS1245-2	MCS1230-2
185A,B,C,D,E	All	MCS1294-1 MCS1104-3	MCS1223-5 MCS1104-3	MCS1220-4 MCS1104-3	MCS1572-1	MCS1245-2	MCS1230-2
A185E*	185-0968 thru 185-1300	MCS1294-1 MCS1104-3	MCS1223-5 MCS1104-3	MCS1220-4 MCS1104-3	MCS1572-1	MCS1245-2	MCS1230-2
A185E*	185-1301 thru 18502007	MCC299505-0301 MCS1104-3	MCC299506-0103 MCS1104-3	MCC299507-0201 MCS1104-3	MCS1572-1	MCS1245-2	MCS1230-2
A185E*	18502008 thru 18502025	MCC299505-0501 MCS1104-3	MCC299506-0201 MCS1104-3	MCC299507-0401 MCS1104-3	MCS1572-1	MCS1245-2	MCS1230-2
A185E*	18502026 thru 18502027	MCC299505-0301 MCS1104-3	MCC299506-0103 MCS1104-3	MCC299507-0201 MCS1104-3	MCS1572-1	MCS1245-2	MCS1230-2
A185E*	18502028 thru 18502090	MCC299505-0501 MCS1104-3	MCC299506-0201 MCS1104-3	MCC299507-0401 MCS1104-3	MCS1572-1	MCS1245-2	MCS1230-2
A185F*	18502091 thru 18502310	MCC299505-0501 MCS1104-3	MCC299506-0201 MCS1104-3	MCC299507-0401 MCS1104-3	MCS1572-1	MCS1245-2	MCS1230-2
A185F*	18502311 thru 18503153	MCC299505-0501 MCS1106-3	MCC299506-0201 MCS1104-3	MCC299507-0401 MCS1104-3	MCS1572-1	MCS1245-2	MCS1230-2
A185F*	18503154 thru 18503683	MC9863053-17 MCS1106-3	MC345-085-7 MCS1104-3	MC9862066-3 MCS1104-3	MC9860074-3	MC9860074-4	
A185F*	18503684 thru 18504448	MC9863056-5 MCS1106-3	MC345-085-7 MCS1104-3	MC9862066-3 MCS1104-3	MC9860074-3	MC9860074-4	
188,188A	All	MCS1391-18 MCS1104-3	MCS1391-19 MCS1104-3	MCS1220-13 MCS1104-3			MCS2323-5
188B,A-188B, A-188B	All	MCS2149-1 MCS1104-3	MCS2149-2 MCS1104-3	MCC299507-0301 MCS1104-3			MCS2323-5
A188,A188A	All	MCS1391-20 MCS1104-3	MCS1391-19 MCS1104-3	MCS1220-13 MCS1104-3			MCS2323-5
A188B*	18802349 thru 18802745 18802349T thru 18802745T	MCS2149-1 MCS1106-3	MCS2149-2 MCS1106-3	MCC299507-0301 MCS1106-3			MCS2323-5
A188B*	18802746 thru 18803973 18802746T thru 18803973T	MCC299508-0301 MCS1106-3	MCC299508-0302 MCS1106-3	MCC299508-0401 MCS1106-3			MCS2323-5
T188C	All	MCC299508-0303 MCS1106-3	MCC299508-0304 MCS1106-3	MCC299508-0402 MCS1106-3			
190	All	MC0411091-4 MCS1104-3**	MC0311031-1 MCS1104-3**	MCS1104-3**			

* Denotes partial model eligibility. **If replacing P/N S1186-1 or P/N 0550158 also order RE-KT-1 hardware kit.

† Denotes eligible for use as a carburetor heat control only.

Eligibility continued on next page.

New Controls!

Engine, Cowl Flap and Carb Heat Controls for Cessna Aircraft

McFarlane
FAA-PMA Approved

Model	Serial Number	Throttle Control Rod End	Propeller Control Rod End	Mixture Control Rod End or Wire Clamp	Cowl Flap Left	Cowl Flap Right	Carb Heat Control Wire Clamp
195,195A,B	All	MC0411091-4 MCS1104-3**	MC0311031-2 MCS1104-3**	MCS1104-3**			
205,205A	All	MCS1219-1 MCS1104-3	MCS1223-17 MCS1104-3	MCS1220-3 MCS1104-3	MCS1244-5	MCS1244-31	
206	All	MCS1219-1 MCS1104-3	MCS1223-17 MCS1104-3	MCS1220-3 MCS1104-3	MCS1244-5	MCS1244-31	
206H	All	MC565-549-041 MCS1104-3	MC565-580-012 MCS1104-3	MC565-548-043 MCS1104-3	MC580-703-026	MC580-703-027	
P206,P206A,B	All	MCS1222-10A MCS1104-3	MCS1223-4 MCS1104-3	MCS1220-3 MCS1104-3	MCS1244-5	MCS1244-31	
P206C,D,E	All	MCC299505-0101 MCS1104-3	MCC299506-0101 MCS1104-3	MCC299507-0101 MCS1104-3	MCS1244-5	MCS1244-31	
T206H	All	MC565-549-041 MCS1104-3	MC565-580-012 MCS1104-3	MC565-548-043 MCS1104-3	MC580-703-026	MC580-703-027	
TP206A*	P2060161 thru P2060274	MCS1222-10A MCS1104-3	MCS1223-4 MCS1104-3	MCS1220-3 MCS1104-3	MCS1244-5	MCS1244-31	
TP206A*,B	P2060275 thru P2060419	MCS1222-10A MCS1104-3	MCS1223-4 MCS1104-3	MCS1220-3 MCS1104-3	MCS1244-32	MCS1244-31	
TP206C,D,E	All	MCC299505-0101 MCS1104-3	MCC299506-0101 MCS1104-3	MCC299507-0101 MCS1104-3	MCS1244-32	MCS1244-31	
TU206A*	U2060438 thru U2060617	MCS1222-10A MCS1104-3	MCS1223-4 MCS1104-3	MCS1220-3 MCS1104-3	MCS1244-5	MCS1244-31	
TU206A*,B	U2060618 thru U206-0914	MCS1222-10A MCS1104-3	MCS1223-4 MCS1104-3	MCS1220-3 MCS1104-3	MCS1244-32	MCS1244-31	
TU206C,D,E,F	All	MCC299505-0101 MCS1104-3	MCC299506-0101 MCS1104-3	MCC299507-0101 MCS1104-3	MCS1244-32	MCS1244-31	
TU206G*	U20603522 thru U20604649	MC9863053-13 MCS1104-3	MC9862067-1 MCS1104-3	MC9862066-1 MCS1104-3	MCS1244-32	MCS1244-31	
TU206G*	U20604650 thru U20607020	MC9863056-2 MCS1104-3	MC9862067-1 MCS1104-3	MC9862066-1 MCS1104-3	MCS1244-32	MCS1244-31	
U206,U206A,B	All	MCS1222-10A MCS1104-3	MCS1223-4 MCS1104-3	MCS1220-3 MCS1104-3	MCS1244-5	MCS1244-31	
U206C,D,E	All	MCC299505-0101 MCS1104-3	MCC299506-0101 MCS1104-3	MCC299507-0101 MCS1104-3	MCS1244-5	MCS1244-31	
U206F*	U20601701 thru U20602199	MCC299505-0101 MCS1104-3	MCC299506-0101 MCS1104-3	MCC299507-0101 MCS1104-3	MCS1244-5	MCS1244-31	
U206F*	U20602200 thru U20603521	MCC299505-0101 MCS1104-3	MCC299506-0101 MCS1104-3	MCC299507-0101 MCS1104-3	MCS1244-32	MCS1244-31	
U206G*	U20603522 thru U20604649	MC9863053-13 MCS1104-3	MC9862067-1 MCS1104-3	MC9862066-1 MCS1104-3	MCS1244-32	MCS1244-31	
U206G*	U20604650 thru U20607020	MC9863056-2 MCS1104-3	MC9862067-1 MCS1104-3	MC9862066-1 MCS1104-3	MCS1244-32	MCS1244-31	
207,T207	All	MCS1222-25A MCS1104-3	MCS1223-16 MCS1104-3	MCS1220-12A MCS1104-3	MCS1244-29	MCS1244-30	
207A*,T207A*	20700363 thru 20700482	MC9863053-16 MCS1104-3	MC9862067-12 MCS1104-3	MC9862066-5 MCS1104-3	MCS1244-29	MCS1244-30	
207A*,T207A*	20700483 thru 20700788	MC9863056-4 MCS1104-3	MC9862067-12 MCS1104-3	MC9862066-5 MCS1104-3	MCS1244-29	MCS1244-30	
210,210A	All	MC1213228-2 MCS1104-3	MCS1223-17 MCS1104-3	MC1213229-1 MCS1104-3	MC1213040-1	MC1213040-2	
210B,C,D	All	MCS1219-1 MCS1104-3	MCS1223-17 MCS1104-3	MCS1220-3 MCS1104-3	MCS1244-5	MCS1244-31	
210E,F,G	All	MCS1222-10A MCS1104-3	MCS1223-4 MCS1104-3	MCS1220-3 MCS1104-3	MCS1244-5	MCS1244-31	
210H,J	All	MCC299505-0101 MCS1104-3	MCC299506-0101 MCS1104-3	MCC299507-0101 MCS1104-3	MCS1244-5	MCS1244-31	
210K*	21059200 thru 21059240	MCC299505-0101 MCS1104-3	MCC299506-0101 MCS1104-3	MCC299507-0101 MCS1104-3	MCS1244-5	MCS1244-31	
210K*,L	21059241 thru 21061573	MCC299505-0101 MCS1104-3	MCC299506-0101 MCS1104-3	MCC299507-0101 MCS1104-3	MCS1244-32	MCS1244-31	
210M	All	MC9863053-13 MCS1104-3	MC9862067-1 MCS1104-3	MC9862066-1 MCS1104-3	MCS1244-32	MCS1244-31	
210N	All	MC9863056-2 MCS1104-3	MC9862067-1 MCS1104-3	MC9862066-1 MCS1104-3	MCS1244-32	MCS1244-31	
210R	All	MCC299513-0101 MCS1104-3	MCS1104-3	MCS1104-3			
P210N*	P21000001 thru P21000150	MC9863053-13 MCS1104-3	MC9862067-1 MCS1104-3	MC9862066-1 MCS1104-3	MCS1244-32	MCS1244-31	
P210N*	P21000151 thru P21000834	MC9863056-2 MCS1104-3	MC9862067-1 MCS1104-3	MC9862066-1 MCS1104-3	MCS1244-32	MCS1244-31	
P210R	All	MCC299513-0101 MCS1104-3	MCS1104-3	MCS1104-3	MCS1106-3	MCS1106-3	
T210F	All	MCS1222-10A MCS1104-3	MCS1223-4 MCS1104-3	MCS1220-3 MCS1104-3	MCS1244-5	MCS1244-31	
T210G	All	MCS1222-10A MCS1104-3	MCS1223-4 MCS1104-3	MCS1220-3 MCS1104-3	MCS1244-32	MCS1244-31	
T210H,J	All	MCC299505-0101 MCS1104-3	MCC299506-0101 MCS1104-3	MCC299507-0101 MCS1104-3	MCS1244-32	MCS1244-31	
T210K*	21059200 thru 21059240	MCC299505-0101 MCS1104-3	MCC299506-0101 MCS1104-3	MCC299507-0101 MCS1104-3	MCS1244-5	MCS1244-31	
T210K*,L	21059241 thru 21061573	MCC299505-0101 MCS1104-3	MCC299506-0101 MCS1104-3	MCC299507-0101 MCS1104-3	MCS1244-32	MCS1244-31	
T210M	All	MC9863053-13 MCS1104-3	MC9862067-1 MCS1104-3	MC9862066-1 MCS1104-3	MCS1244-32	MCS1244-31	
T210N	All	MC9863056-2 MCS1104-3	MC9862067-1 MCS1104-3	MC9862066-1 MCS1104-3	MCS1244-32	MCS1244-31	
T210R	All	MCC299513-0101 MCS1104-3	MCS1104-3	MCS1104-3	MCS1106-4	MCS1106-4	

* Denotes partial model eligibility. **If replacing P/N S1186-1 or P/N 0550158 also order RE-KT-1 hardware kit.

Model	Serial Number	Throttle Control	Propeller Control	Mixture Control
PA18/PA-18S/PA18"105"	All			MC600-72
PA18S"105"/PA18A/	All			MC600-72
PA18"125"	All			MC600-72
PA18S"125"/PA18AS"125"	All			MC600-72
PA18"135"/PA18S"135"	All			MC600-72
PA18A"135"/ PA18AS"135"	All			MC600-72
L-21A/L-21B/PA18"150"	All			MC600-72
PA18A"150"/PA18S"150"	All			MC600-72
PA18AS"150"	All			MC600-72
PA19/PA19S/L-18C	All			MC600-72
PA20/PA20S/PA20-115	20-1 thru 20-933	MC455-139		MC600-72
PA20S-115/PA20-135	20-934 thru 20-1121	MC455-139		MC600-72
PA20S-135	20-934 thru 20-1121	MC455-139		MC600-72
PA22 (125hp)	22-1 thru 22-533	MC455-139		MC600-72
PA22-135	22-534 thru 22-2377	MC455-139		MC600-72
PA22-135	22-2379 thru 22-2424	MC455-139		MC600-72
PA22-135/PA22S-135	22-2378, 22-2425 thru 22-3217	MC12693-04		MC600-72
PA22-135/PA22S-135	22-3219 thru 22-3386	MC12693-04		MC600-72
PA22-150/PA22S-150	22-2378, 22-2425 thru 22-7642	MC12693-04		MC600-72
PA22-160/PA22S-160	22-5139, 22-5603 thru 22-7642	MC12693-04		MC600-72
PA22-108	22-8000 and On	MC12693-04		MC600-72
PA24-250	24-105 thru 24-2174		MC455-184	MC600-72
PA24-250	24-2176 thru 24-2298		MC455-252	MC600-72
PA24-250	24-2175, 24-2299 thru 24-3687		MC455-252	MC600-72
PA24-260	24-3642, 24-4000 thru 24-4803		MC455-252	MC600-72 Carbureted Engine Only
PA24-400	26-2 thru 26-148			MC22633-04
PA28-140	28-20002 thru 28-24999	MC12693-04		MC600-72
PA28-140	28-25000 thru 28-26956	MC455-353		MC455-352
PA28-140	28-7125001 thru 28-7725290	MC455-353		MC455-352
PA28-150	28-1 thru 28-4377	MC12693-04		MC600-72
PA28-151	28-7415001 thru 28-7715314	MC455-350		MC455-352
PA28-160	28-1 thru 28-4377	MC12693-04		MC600-72
PA28S-160	28-1 thru 28-1760			MC600-72
PA28-161	28-7716002 thru 28-8616057	MC455-350		MC455-352
PA28-161	2816001 thru 2816110 (Less 2816066)	MC455-350		MC455-352
PA28-161 Cadet	2841001 and On	MC455-350		MC455-352
PA28-180	28-671 thru 28-4377	MC12693-04		MC600-72
PA28-180	28-4378 thru 28-5152	MC455-333		MC455-332
PA28-180	28-5153 thru 28-5869	MC455-350		MC455-352
PA28-180	28-7105001 thru 28-7505261	MC455-350		MC455-352
PA28R-180	28R-30005 thru 28R-30481	MC455-322	MC455-322	MC455-322
PA28R-180	28R-30483 thru 28R-31279	MC455-322	MC455-322	MC455-322
PA28R-180	28R-7130001 thru 28R-7130019	MC455-322	MC455-322	MC455-322
PA28S-180	28-671 thru 28-4377			MC600-72
PA28-181	28-7690001 thru 28-8290174	MC455-350		MC455-352
PA28-181	28-8390001 and On	MC455-350		MC455-352
PA28-201T	28-7921001 thru 28-7921095	MC455-322	MC455-322	MC455-361
PA28R-200	28R-30482, 28R-35001 thru 28R-35830	MC455-322	MC455-322	MC455-322
PA28R-200	28R-7135001 thru 28R-7635545	MC455-322	MC455-322	MC455-322
PA28R-201	28R-7737002 thru 28R-7837317	MC455-322	MC455-322	MC455-322
PA28R-201	2837001 thru 2837061	MC455-322	MC455-322	MC455-322
PA28R-201T	28R-7703002 thru 28R-7803372	MC455-322	MC455-322	MC455-361
PA28R-201T	2803001 thru 2803015	MC455-322	MC455-322	MC455-361
PA28RT-201	28R-7918001 thru 28R-8018116	MC455-322	MC455-322	MC455-322
PA28RT-201	28R-8118001 and On	MC455-322	MC455-322	MC455-322
PA28RT-201T	28R-7931001 thru 28R-8031188	MC455-322	MC455-322	MC455-361
PA28RT-201T	28R-8131001 and On	MC455-322	MC455-322	MC455-361
PA28-235	28-10003 thru 28-11038	MC12693-04		MC600-72
PA28-235	28-11039	MC12693-04		MC600-72
PA28-235	28-11040 thru 28-11393	MC455-333		MC455-332
PA28-235	28-7110001 thru 28-7210033	MC455-333		MC455-332
PA28-235	28-7310001 thru 28-7710089	MC455-333	MC455-344	MC455-332
PA28-236	28-7911001 thru 28-8211060	MC455-333	MC455-344	MC455-332
PA28-236	28-8311001 and On	MC455-333	MC455-344	MC455-332
PA32-260	32-1111 thru 32-1320	MC455-360		MC455-361
PA32-260	32-7100001 thru 32-7800008	MC455-360		MC455-361
PA32-300	32-40000 thru 32-40565	MC69530-02	MC65451-04	
PA32-300	32-40566 thru 32-41018	MC455-358		
PA32-300	32-7140001 thru 32-7940282	MC455-358		
PA32-301	32-8006001 thru 32-8406020	MC455-358		
PA32-301	32-8506001 and On	MC455-358		
PA32-301T	32-8024001 thru 32-8424002	MC455-344		MC455-344
PA32-301T	32-8524001 and On	MC455-344		MC455-344
PA32R-301T	32R-8029001 thru 32R-8229078	MC455-360		MC455-360
PA32R-301T	32R-8329001 and On	MC455-360		MC455-360
PA32RT-300T	32R-7887001 thru 32R-7987146	MC455-360		MC455-360

See page 16 for Piper rod ends.

MC600 Series Solid Wire Vernier Mixture Controls

Precise vernier control for less money!

- Minor alteration (requires logbook entry only)
- FAA-PMA approved for many Cessna, Piper, Beechcraft, Mooney, Maule and Stinson aircraft. See previous pages for eligibility
- Fits most carbureted engines
- Teflon lined conduit for smooth, consistent operation
- Extra long - Trim to exact length



Installation Tip:

The MC600 series mixture controls require a 3/4 inch instrument panel hole. Most aircraft have a 1/2 inch hole from the factory that must be enlarged before the installation of an MC600 series mixture control.

Solid Wire Vernier Mixture Control for Beechcraft, Mooney, Maule and Stinson Aircraft

FAA-PMA Approved

- Precise mixture control for less than the original replacement part
- Extra long - trim to exact length
- High quality McFarlane manufacture

Make	Model	Serial Number	Part Number
Raytheon (Beechcraft)	19A, M19A, B19,23, A23-19, B23	All	MC600-120
Raytheon (Beechcraft)	35, A35, B35, C35, D35, E35, F35, G35, H35	All	MC600-72
Mooney	M20, M20A, M20B, M20C, M20D	All	MC600-72
Maule	Bee Dee M-4, M4, M-4C, M-4S, M-4T	All with Carbureted Engine	MC600-72
Maule	M-4-220, M-4-220-C, M-4-220S	All with Carbureted Engine	MC600-72
Maule	M-4-220T, M-4-180C, M-4-180S, M-4-180T	All with Carbureted Engine	MC600-72
Maule	M-5-180C, M-5-220T, M-5-235C	All with Carbureted Engine	MC600-72
Maule	M-5-210TC, M-6-180, M-6-235, MX-7-160	All with Carbureted Engine	MC600-72
Maule	MXT-7-160, MX-7-180, MX-7-180A	All with Carbureted Engine	MC600-72
Maule	MXT-7-180, MXT-7-180A, MX-7-180B	All with Carbureted Engine	MC600-72
Maule	MX-7-180C, M-7-235, MX-7-235	All with Carbureted Engine	MC600-72
Maule	MX-7-235A, MX-7-235B, MX-7-235C, M-8-235	All with Carbureted Engine	MC600-72
Univair (Stinson)	108, 108-1, 108-2, 108-3, 108-5	All	MC600-72



Throttle Controls for Grumman Aircraft

FAA-PMA Approved

- Throttle Controls for aircraft manufactured by Grumman American, Gulfstream Aerospace Corp. or Tiger Aircraft LLC.
- McFarlane has developed a longer conduit terminal that allows extra clearance between the swivel joint and the air filter box at the clamp location.
- Thread length has been tailored to allow full adjustment of the Grumman swivel assembly.
- Push rod length has been tailored to ensure that McFarlane throttle controls duplicate the original controls in fit and function.

Model	Serial Number	Part Number
AA-1	AA1-0433 and On	MC507005-1
AA-1A	AA1A-0001 and On	MC507005-1
AA-1B	AA1B-0001 and On	MC507005-1
AA-1C	AA1B-0601	MC507005-1
AA-1C	AA1C-0001 and On	MC507005-1
AA-5	AA5-0001 and On	MC507005-2
AA-5A	AA5A-0283 and On	MC507005-2
AA-5B	AA5B-0001 and On	MC507005-3



Engine Controls for Bellanca Viking Aircraft

FAA-PMA Approved

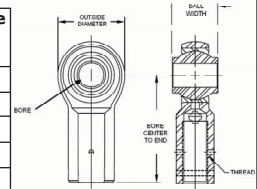
Model	Serial Number	Throttle	Propeller	Mixture
17-30A	30263 and On, and aircraft with a S/N prefix "75-"	MCS191783-18	MCS191783-1	MCS191783-16
17-31A	73-32-128 and On, and aircraft with a S/N prefix "75-"	MCS191783-18	MCS191783-1	MCS191783-17
17-31ATC	73-31067 and On, and aircraft with a S/N prefix "75-"	MCS191783-18	MCS191783-1	MCS191783-17

Rod Ends for Experimental Aircraft

New!

Not for use on certified aircraft. Not FAA-PMA approved. See pages 14-16 for FAA-PMA approved rod ends.

P/N	Bore	O.D.	Bore Ctr to End	Ball Width	Thread	Thread Type	Ultimate Static Load
(~)	(in)	(in)	(in)	(in)	(in)	(~)	(lbs)
MCR101-3	0.190	0.625	1.062	0.312	10-32	Internal	1,531
MCR102-3	0.190	0.750	1.375	0.437	1/4-28	Internal	2,881
MCR102-4	0.250	0.812	1.375	0.437	1/4-28	Internal	2,950
MCR201-3	0.190	0.625	1.250	0.312	10-32	External	1,169

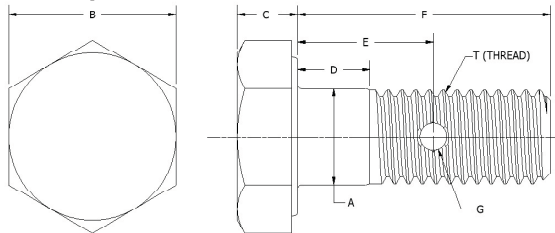


Bolt Style Wire Clamps for Solid Wire Controls for Cessna Aircraft

FAA-PMA Approved

- Unique design to reduce wire stress
- Heat treated stainless steel for wear and corrosion resistance
- The best for less!
- See pages 7-9 to find the correct clamp for your mixture or carb heat control.
- Go to <http://www.mcfarlaneaviation.com/Products> to find the correct clamp for all other applications.

New!



Part Number (~)	A	B	C	D	E	F	G	T	Application
	Bolt Dia. (in)	Wrench Size (in)	Thick (in)	Grip Length (in)	Hole Position (in)	Shank Length (in)	Hole Dia. (in)	Thread (~)	
MCS2323-1	0.188	3/8	0.125	0.250	0.183	0.653	0.073	10-32	Carb heat, starter, mixture, cabin heat, fuel shutoff, strainer drain, defrost, shutter, wastegate, oxygen control, de-ice, heater, airbox, alternate air, flap/elevator, pressure air dump, heat exchanger
MCS2323-2	0.250	7/16	0.156	0.312	0.325	0.781	0.073	1/4 - 28	cabin heat, mixture, defrost, cabin heat
MCS2323-3	0.250	7/16	0.156	0.188	0.199	0.539	0.073	1/4 - 28	strainer drain, cowl flaps, carb heat, alternate air
MCS2323-4	0.250	7/16	0.156	0.313	0.312	0.781	0.073	1/4 - 28	mixture, flap indicator, flap guide, fuel shut-off
MCS2323-5	0.188	3/8	0.125	0.125	0.188	0.531	0.073	10-32	cabin air, carb heat, starter, airbox, defrost, flap, shutter, oxygen
MCS2323-6	0.250	7/16	0.156	0.188	0.355	0.656	0.073	1/4 - 28	mixture, hopper, induction
MCS2323-7	0.188	3/8	0.125	0.250	0.192	0.656	0.076	10-32	fuel shut-off, alternate air, flap elevator trim
MCS2323-8	0.188	3/8	0.125	0.250	0.202	0.656	0.096	10-32	fuel shut-off oxygen control
MCS2323-9	0.250	7/16	0.156	0.438	0.343	0.906	0.129	1/4 - 28	flap control, flap guide
MCS2323-10	0.188	3/8	0.125	0.125	0.204	0.477	0.079	10-32	fuel shut-off, heat exchanger
MCS2323-11	0.188	3/8	0.125	0.250	0.266	0.656	0.076	10-32	mixture, bleed air, fuel selector, flap/elevator
MCS2323-12	0.250	7/16	0.156	0.188	0.357	0.656	0.073	1/4 - 28	mixture, cabin heat, pressurization
MCS2323-13	0.250	7/16	0.156	0.313	0.271	0.781	0.073	1/4 - 28	mixture, alternate air, bleed air,
MCS2323-14	0.188	3/8	0.125	0.125	0.132	0.531	0.082	10-32	cabin heat, cabin air
MCS2323-19	0.188	3/8	0.125	0.125	0.200	0.531	0.094	10-32	defroster